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| 09/380,781      | 09/09/1999  | TAKERU YOSHINO       | 1165.759            | 3061             |

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EXAMINER

SCHECHTER, ANDREW M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2871

DATE MAILED: 01/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/380,781

Applicant(s)

YOSHINO ET AL.

Examiner

Andrew Schechter

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 09 October 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-19 and 22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-19 and 22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 09 October 2001 is: a) ☒ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Drawings***

1. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on 9 October 2001 have been approved.

### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: "LCD preventing leakage current by providing slits in either a dummy electrode or a conductive light-cutting film".

### ***Response to Arguments***

3. Applicant's arguments filed 9 October 2001 have been fully considered but they are not persuasive.

In response to the rejection under 35 U.S.C. 112, 2<sup>nd</sup> paragraph of the Office Action of 9 May 2001, the applicant amended the specification to delete the word "peripheral" on p. 28, line 9, "to avoid any confusion". Unfortunately, the examiner is still confused over the use of the words "periphery," "area," and "periphery thereof" in these claims. To avoid further confusion, the examiner would appreciate the applicant explaining, with reference to the figures, the areas and peripheries referred to in each of the relevant claims.

***Claim Objections***

4. Claim 13 is a duplicate of claim 11; it appears to the examiner that it should depend on claim 12, and for examining purposes it is treated below as if it does.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 5, 7, 12, and 6, 8, 9, 13, 18, 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 includes a limitation "on an area in which the light-cutting film is superposed with the sealing member and in the periphery of that area"; claim 7 includes a similar phrase in lines 4-7 on p. 35; claim 12 includes the phrase "at a portion in which the light-cutting film is superposed with the sealing member and the periphery thereof."

In each case, the meaning is unclear. In claim 5, for instance, the Examiner interprets the claim language to say that there is an area where the film superposes the sealing member and that the slits are in that area, and furthermore, in the periphery of that area. (Fig. 13 could be taken to show this.) The difficulties with claims 7 and 12 are analogous. Is the "periphery thereof" in claim 12 within the "image area" or outside it? For examining purposes below, it is assumed to be exclusively outside the "image area". Applicant should clarify the meanings intended in the claims.

Claims 6, 8, 9, 13, 18, and 19 depend on claims 5, 7, and 12.

7. Claims 10, 11, 18, and 19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As amended, claim 10 recites "a plurality of transparent electrodes are further provided on the insulating film". Are they "on" the insulating film or below it? Are these different than the "first and second transparent electrodes for image"?

Claims 11, 18, and 19 depend on claim 10.

8. Claims 1, 3, 4, 12-19, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

What is meant by a "non-pixel" or "non-image" electrode in a passive matrix device? Lead electrodes are not structurally distinct from pixel electrodes here, as they are in active matrix devices. Considering a transparent electrode, does the applicant consider the portion in the image area the "pixel" or "image" electrode, and the part outside the image area (in the periphery) to be "non-pixel" or "non-image" electrodes? For examining purposes, this is assumed to be the case.

### ***Claim Rejections - 35 USC § 102***

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

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(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

10. Claims 1, 3, 4, and 22 are rejected under 35 U.S.C. 102(a) as being anticipated by *Sato et al.*, Japanese Patent No. 06-051332A.

Considering the limitations of claim 1, *Sato* discloses a liquid crystal apparatus comprising: first and second substrates [8 and 9], first and second electrodes [1 and 2], a sealing member [4] with conductive spacers [abstract], a non-pixel electrode [2] which is a lead electrode for drive, and a dummy electrode [5] wherein the dummy electrode is divided by a plurality of slits [Fig. 1]. Claim 1 is therefore anticipated by *Sato*.

The conductive spacers in *Sato* are inherently smaller than the width of the slits dividing the dummy electrode [else the device would not work], and the dummy electrode is parallel to and along the side of the sealing member. Claims 3 and 4 are therefore anticipated by *Sato*.

Considering claim 22, the device of *Sato* has a dummy electrode arranged opposite the drive electrode, arranged along an elongated direction (vertical in the figure) of a non-image electrode [the non-image part of the electrode labeled 1], has slits across the elongated directed, which prevent current flowing. Claim 22 is therefore anticipated by *Sato*.

11. Claims 5 and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by *Shimada et al.*, U.S. Patent No. 6,268,895.

*Shimada* discloses [see Fig. 10-15, for instance] an LCD with a leak current preventing function, comprising first and second transparent substrates [203, 213], first and second transparent electrodes for image [212, 215], sealing member [217], conductive light-cutting film [220] in both the image area and the peripheral portion outside the image area, and separation slits [see Figs. 12 and 14, and col. 19, lines 20-48] in the region where the film superposes the sealing member and in the periphery of that area. Claim 5 is therefore anticipated.

The width of the slit is less than the gate line spacing, so it is far less than 3/10 the width of the wall of the sealing member. Claim 6 is therefore anticipated as well.

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 12, 13, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sato* as applied to claim 1 above, and further in view of *Shimada*.

Claim 12 adds to claim 1 the limitations of claim 5 relating to the conductive light-cutting film superposed with the sealing member and having slits. *Sato* does not appear

to teach this (the examiner does not have a translation of *Sato*, and is assuming that the electrodes 5 and 6 are transparent, so not "light-cutting"; if the applicant believes otherwise, the examiner would appreciate being informed of this). *Sato* does teach the limitations of claims 18 and 19, as discussed above.

As discussed above, *Shimada* does teach these additional limitations of claim 5. It would be obvious to one of ordinary skill in the art to combine the light-shielding film of *Shimada* with the device of *Sato*, motivated among other reasons by the desire to prevent light leakage from the periphery while reducing fabrication costs as taught by *Shimada*. Claims 12, 13, 18, and 19 are therefore unpatentable.

#### ***Allowable Subject Matter***

14. Claims 7-11 and 14-17 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

15. The following is a statement of reasons for the indication of allowable subject matter:

Claim 7 adds to claim 5 the limitation that "separation slits for dividing... the transparent electrode for image into a plurality of portions are provided on an area" where the sealing member superposes the electrodes and the light-cutting film. Since *Shimada* discloses an active-matrix LCD, the transparent electrodes for image (pixel electrodes) do not overlap the sealing material, so it does not meet this additional limitation. Nor does the other prior art of record teach this combination of features, so claims 7-9 would be allowable if rewritten appropriately.



Claim 10 adds to claim 5 the limitation that "the light-cutting film has the separation slit for dividing the light-cutting film into a plurality of portions at the slightly inner position from the portion which is superposed with at least sealing member"; this "slightly inner position" of the slit is not disclosed by *Shimada* or the other prior art of record, so claims 10 and 11 would be allowable if rewritten appropriately.

Claims 14 and 16 contain the limitations of claims 7 and 10 respectively, so claims 14-17 would be allowable if rewritten appropriately.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (703) 306-5801. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Sikes can be reached on (703) 308-4842. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 746-4711 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*AS*

Andrew Schechter  
December 21, 2001

  
TOANTON  
PRIMARY EXAMINER